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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

WANG, JIN CHENG

ART UNIT	PAPER NUMBER
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2672

DATE MAILED: 02/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/628,122

Applicant(s)

ELLIOT, CANDICE HELLEN
BROWN

Examiner

Jin-Cheng Wang

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5,7-10,12-20,22-25,27-39,42-46 and 51-55 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 37 and 38 is/are allowed.
- 6) ☒ Claim(s) 1-5,7-10,12-20,22-25,27-36,39,42-46 and 51-55 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9/29/2005</u> | 6) <input type="checkbox"/> Other: _____ |

SUPPLEMENTAL ACTION

Response to Amendment

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/29/2005 has been entered. Claims 6, 11, 21, 26, 40-41 and 47-50 have been canceled. Claims 1-5, 7-10, 12-20, 22-25, 27-39, 42-46 and 51-55 are pending in the present application.

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).
2. A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application, and all other rejections have been overcome. See 37 CFR 1.130(b).

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3. Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-5 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 2 of U.S. Pat. No. 6,950,115. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following reason: The elements of the present application's claims 1-5 constitute a subset of the elements of the patented claim 2. The claim limitation "each said emitter is connected to a driver and at least two neighboring blue emitters in a row are connected to the same driver" set forth in the present application's claim 1 is implied by the patented claim 2's "associated structures connected to said first, second, and third transistors", meaning that the same driver connecting the at least two neighboring blue emitters. Therefore, it would have been obvious to one of ordinary skill in the art to make the claim made in this application, because it is only a subset of what has been claimed before.

5. Claims 7-9 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 4 of U.S. Pat. No. 6,950,115. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following reason: The elements of the present application's claims 7-9 constitute a subset of the elements of the patented claim 4. Therefore, it would have been obvious to one of ordinary skill in the art to make the claim made in this application, because it is only a subset of what has been claimed before.

6. Claim 10 is provisionally rejected under the judicially created doctrine of obviousness-

type double patenting as being unpatentable over claim 4 of U.S. Pat. No. 6,950,115. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following reason: The elements of the present application's claim 10 constitute a subset of the elements of the patented claim 4. Therefore, it would have been obvious to one of ordinary skill in the art to make the claim made in this application, because it is only a subset of what has been claimed before.

7. Claims 12-14 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 4 of U.S. Pat. No. 6,950,115. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following reason: The elements of the present application's claims 12-14 constitute a subset of the elements of the patented claim 4. Therefore, it would have been obvious to one of ordinary skill in the art to make the claim made in this application, because it is only a subset of what has been claimed before.

8. Claim 15 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 4 of U.S. Pat. No. 6,950,115. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following reason: The elements of the present application's claim 15 constitute a subset of the elements of the patented claim 4. Therefore, it would have been obvious to one of ordinary skill in the art to make the claim made in this application, because it is only a subset of what has been claimed before.

9. Claims 16-20 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 2 of U.S. Pat. No.

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6,950,115. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following reason: The elements of the present application's claims 16-20 constitute a subset of the elements of the patented claim 2. The claim limitation "each said emitter is connected to a driver and at least two neighboring blue emitters in a row are connected to the same driver" set forth in the present application's claim 16 is implied by the patented claim 2's "associated structures connected to said first, second, and third transistors", meaning that the same driver connecting the at least two neighboring blue emitters. Therefore, it would have been obvious to one of ordinary skill in the art to make the claim made in this application, because it is only a subset of what has been claimed before.

10. Claims 22-24 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 4 of U.S. Pat. No. 6,950,115. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following reason: The elements of the present application's claims 22-24 constitute a subset of the elements of the patented claim 4. Therefore, it would have been obvious to one of ordinary skill in the art to make the claim made in this application, because it is only a subset of what has been claimed before.

11. Claims 25 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 4 of U.S. Pat. No. 6,950,115. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following reason: The elements of the present application's claims 25 constitute a subset of the elements of the patented claim 4. The claim limitation "said blue emitter having an emitting area larger than that of each of said red emitters and said green emitters" set forth in the

present application's claim 25 is implied by the patented claim 4's "said transistors for said red emitters and said green emitters being sized to have a luminance value equal to a luminance value of said blue emitters", meaning that collecting the transistors of the blue emitters together makes a bigger and more visible dark spot because the grouping of the transistors for red emitters and the green emitters being sized to have a luminance value equal to a luminance value of said blue emitter. The blue emitter has an emitting area equal to the red emitters and green emitters collecting together and therefore implying that the blue emitter has an emitting area larger than that of each of the said red emitters and said green emitters. Therefore, it would have been obvious to one of ordinary skill in the art to make the claim made in this application, because it is only a subset of what has been claimed before.

12. Claims 27-29 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 4 of U.S. Pat. No. 6,950,115. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following reason: The elements of the present application's claims 27-29 constitute a subset of the elements of the patented claim 4. The claim limitation "said blue emitter having a larger drive to luminance gain than that of each of said red emitters and said green emitters" set forth in the present application's claim 27 is implied by the patented claim 4's "said transistors for said red emitters and said green emitters being sized to have a luminance value equal to a luminance value of said blue emitters", meaning that collecting the transistors of the blue emitters together makes a bigger and more visible dark spot because the grouping of the transistors for red emitters and the green emitters together being sized to have a luminance value equal to a luminance value of said blue emitter. The blue emitter has an

luminance value equal to a luminance value of said red emitters and said green emitters together and therefore implying that the blue emitter has a larger drive to luminance gain than each of said red emitters and said green emitters. Therefore, it would have been obvious to one of ordinary skill in the art to make the claim made in this application, because it is only a subset of what has been claimed before.

13. Claims 30 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 4 of U.S. Pat. No. 6,950,115. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following reason: The elements of the present application's claim 30 constitute a subset of the elements of the patented claim 4. The claim limitation "said blue emitter having a larger drive to luminance gain than that of each of said red emitters and said green emitters" set forth in the present application's claim 30 is implied by the patented claim 4's "said transistors for said red emitters and said green emitters being sized to have a luminance value equal to a luminance value of said blue emitters", meaning that collecting the transistors of the blue emitters together makes a bigger and more visible dark spot because the grouping of the transistors for red emitters and the green emitters together being sized to have a luminance value equal to a luminance value of said blue emitter. The blue emitter has an luminance value equal to a luminance value of said red emitters and said green emitters together and therefore implying that the blue emitter has a larger drive to luminance gain than each of said red emitters and said green emitters. Therefore, it would have been obvious to one of ordinary skill in the art to make the claim made in this application, because it is only a subset of what has been claimed before.

14. Claims 31-33 are provisionally rejected under the judicially created doctrine of

obviousness-type double patenting as being unpatentable over claim 2 of U.S. Pat. No. 6,950,115. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following reason: The elements of the present application's claims 31-33 constitute a subset of the elements of the patented claim 2. The claim limitation "each said emitter is connected to a driver and at least two neighboring blue emitters in a same row are connected to the same driver" set forth in the present application's claim 31 is implied by the patented claim 2's "associated structures connected to said first, second, and third transistors", meaning that the same driver connecting the at least two neighboring blue emitters. Therefore, it would have been obvious to one of ordinary skill in the art to make the claim made in this application, because it is only a subset of what has been claimed before.

15. Claims 34-36 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 2 of U.S. Pat. No. 6,950,115. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following reason: The elements of the present application's claims 34-36 constitute a subset of the elements of the patented claim 2. The claim limitation "each said emitter is connected to a driver and at least two neighboring blue emitters in a same row are connected to the same driver" set forth in the present application's claim 34 is implied by the patented claim 2's "associated structures connected to said first, second, and third transistors", meaning that the same driver connecting the at least two neighboring blue emitters. Therefore, it would have been obvious to one of ordinary skill in the art to make the claim made in this application, because it is only a subset of what has been claimed before.

16. Claim 39 is provisionally rejected under the judicially created doctrine of obviousness-

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type double patenting as being unpatentable over claim 2 of U.S. Pat. No. 6,950,115. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following reason: The elements of the present application's claims 39 constitute a subset of the elements of the patented claim 2. The claim limitation "each said emitter is connected to a driver and at least two neighboring blue emitters in a same row are connected to the same driver" set forth in the present application's claim 39 is implied by the patented claim 2's "associated structures connected to said first, second, and third transistors", meaning that the same driver connecting the at least two neighboring blue emitters. Therefore, it would have been obvious to one of ordinary skill in the art to make the claim made in this application, because it is only a subset of what has been claimed before.

17. Claims 42-46 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 2 of U.S. Pat. No. 6,950,115. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following reason: The elements of the present application's claims 42-46 constitute a subset of the elements of the patented claim 2. The claim limitation "each said emitter is connected to a driver and at least two neighboring blue emitters in a same row are connected to the same driver" set forth in the present application's claim 42 is implied by the patented claim 2's "associated structures connected to said first, second, and third transistors", meaning that the same driver connecting the at least two neighboring blue emitters. Therefore, it would have been obvious to one of ordinary skill in the art to make the claim made in this application, because it is only a subset of what has been claimed before.

18. Claims 51-55 are provisionally rejected under the judicially created doctrine of

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obviousness-type double patenting as being unpatentable over claim 2 of U.S. Pat. No. 6,950,115. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following reason: The elements of the present application's claims 51-55 constitute a subset of the elements of the patented claim 2. The claim limitation "each said emitter is connected to a driver and at least two neighboring blue emitters in a same row are connected to the same driver" set forth in the present application's claim 51 is implied by the patented claim 2's "associated structures connected to said first, second, and third transistors", meaning that the same driver connecting the at least two neighboring blue emitters. Therefore, it would have been obvious to one of ordinary skill in the art to make the claim made in this application, because it is only a subset of what has been claimed before.

Specification

The disclosure is objected to because of the following informalities: On line 19 of the claim 38, "ach said" should be "each said". Appropriate correction is required.

Claim Objections

Claim 38 is objected to because of the following informalities: On line 19 of the claim 38, "ach said" should be "each said". Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it

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pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-5, 16-20, 31-33, 34-36, 39, 42-46 and 51-55 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

For example, the base claim 1 recites the two “at least two neighboring blue emitters in a row are connected to the same driver.” It is not clear what “a row” means in the claim limitation as recited in the claim 1. It is also not clear what “the same driver” means. It could mean “the same row driver” or “the same column driver”. However, in Fig. 3B of applicant’s specification, the two neighboring blue emitters 42A and 42B are respectively in the second row and the first row (to the row driver 74 and the row driver 72), i.e., the two neighboring blue emitters 42A and 42B are in different rows, not in the same row. Moreover, the two neighboring blue emitters 42A and 42B are connected to the column driver 64, rather than the same row driver such as the row driver 72 or the row driver 74. Therefore, the metes and bounds of the coverage of at least base claim 1 cannot be ascertained.

The base claim 16 (also the base claim 34, or the base claim 39) recites the two “at least two neighboring blue emitters in a same row are connected to the same driver.” It is not clear what “the same driver” means. It could mean “the same row driver” or “the same column driver”. However, in Fig. 3B of applicant’s specification, the two neighboring blue emitters 42A and 42B are respectively in the second row and the first row (to the row driver 74 and the row driver 72), i.e., the two neighboring blue emitters 42A and 42B are in different rows, not in the

same row, as recited in the base claim 16 (claim 34 or 39). Moreover, the two neighboring blue emitters 42A and 42B are connected to the column driver 64, rather than the same row driver such as the row driver 72 or the row driver 74. Therefore, the metes and bounds of the coverage of at least base claim 16 (or the claim 34 or 39) cannot be ascertained.

The base claim 42 recites the two “at least two neighboring blue emitters in a row of at least two three-color pixel elements are connected to the same driver.” It is not clear what “a same row” means in the claim limitation as recited in the claim 42. It is also not clear what “the same driver” means. It could mean “the same row driver” or “the same column driver”. However, in Fig. 3B of applicant’s specification, the two neighboring blue emitters 42A and 42B are respectively in the second row and the first row (to the row driver 74 and the row driver 72), i.e., the two neighboring blue emitters 42A and 42B are in different rows, not in the same row as recited in the base claim 42. Moreover, the two neighboring blue emitters 42A and 42B are connected to the column driver 64, rather than the same row driver such as the row driver 72 or the row driver 74. Therefore, the metes and bounds of the coverage of at least base claim 42 cannot be ascertained.

The base claim 51 recites the two “at least two blue emitters in a same first direction of at least two three-color pixel elements are connected to a same data driver.” It is not clear what “a same first direction” means in the claim limitation as recited in the claim 51. It is also not clear what “the same data driver” means. It could mean “the same row driver” or “the same column driver”. However, in Fig. 3B of applicant’s specification, the two neighboring blue emitters 42A and 42B are respectively in the second row and the first row (to the row driver 74 and the row driver 72), i.e., the two neighboring blue emitters 42A and 42B are in different rows, not in the

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same first direction as recited in the base claim 51. Moreover, the two neighboring blue emitters 42A and 42B are connected to the column driver 64, rather than the same row driver such as the row driver 72 or the row driver 74. Therefore, the metes and bounds of the coverage of at least base claim 51 cannot be ascertained.

To comply with the “written description” requirement of 35 U.S.C. 112, first paragraph, an applicant must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention. The invention is, for purposes of the “written description” inquiry, whatever is now claimed. *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 1563-64, 19 USPQ2d 1111, 1117 (Fed. Cir. 1991). For purposes of written description, one shows “possession” by descriptive means such as words, structures, figures, diagrams, and formulas that fully set forth the claimed invention. *Lockwood v. American Airlines, Inc.*, 107 F.3d 1565, 1572, 41 USPQ2d 1961, 1966 (Fed. Cir. 1997). Such descriptive means cannot be found in the disclosure for the inventions of the base claim 1, 16, 31, 34, 39, 42 and 51.

Claims 2-5 depend upon the base claim 1 and are rejected due to their dependency on the base claim 1.

The claims 17-20 depend upon the base claim 16 and are rejected due to their dependency on the claim 16.

The claims 32-33 depend upon the base claim 31 and are rejected due to their dependency on the claim 31.

The claims 35-36 depend upon the base claim 34 and are rejected due to their dependency on the claim 34.

The claims 43-46 depend upon the base claim 42 and are rejected due to their dependency on the claim 42.

The claims 52-55 depend upon the base claim 51 and are rejected due to their dependency on the claim 51.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-5, 16-20, 31-33, 34-36, 39, 42-46 and 51-55 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

For example, the base claim 1 recites the two “at least two neighboring blue emitters in a row are connected to the same driver.” Applicant failed to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is not clear what “a row” means in the claim limitation as recited in the claim 1. It is also not clear what “the same driver” means. It could mean “the same row driver” or “the same column driver”. However, in Fig. 3B of applicant’s specification, the two neighboring blue emitters 42A and 42B are respectively in the second row and the first row (to the row driver 74 and the row driver 72), i.e., the two neighboring blue emitters 42A and 42B are in different rows, not in the same row. Moreover, the two neighboring blue emitters 42A and 42B are connected to the column driver 64, rather than the same row driver such as the row driver 72 or the row driver 74. Therefore, the metes and bounds of the coverage of at least base claim 1 cannot be ascertained.

The base claim 16 (also the base claim 34, or the base claim 39) recites the two “at least two neighboring blue emitters in a same row are connected to the same driver.” Applicant failed to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is not clear what “the same driver” means. It could mean “the same row driver” or “the same column driver”. However, in Fig. 3B of applicant’s specification, the two neighboring blue emitters 42A and 42B are respectively in the second row and the first row (to the row driver 74 and the row driver 72), i.e., the two neighboring blue emitters 42A and 42B are in different rows, not in the same row, as recited in the base claim 16 (claim 34 or 39). Moreover, the two neighboring blue emitters 42A and 42B are connected to the column driver 64, rather than the same row driver such as the row driver 72 or the row driver 74. Therefore, the metes and bounds of the coverage of at least base claim 16 (or the claim 34 or 39) cannot be ascertained.

The base claim 42 recites the two “at least two neighboring blue emitters in a row of at least two three-color pixel elements are connected to the same driver.” Applicant failed to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is not clear what “a same row” means in the claim limitation as recited in the claim 42. It is also not clear what “the same driver” means. It could mean “the same row driver” or “the same column driver”. However, in Fig. 3B of applicant’s specification, the two neighboring blue emitters 42A and 42B are respectively in the second row and the first row (to the row driver 74 and the row driver 72), i.e., the two neighboring blue emitters 42A and 42B are in different rows, not in the same row as recited in the base claim 42. Moreover, the two neighboring blue emitters 42A and 42B are connected to the column driver 64, rather than the same row driver

such as the row driver 72 or the row driver 74. Therefore, the metes and bounds of the coverage of at least base claim 42 cannot be ascertained.

The base claim 51 recites the two “at least two blue emitters in a same first direction of at least two three-color pixel elements are connected to a same data driver.” Applicant failed to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is not clear what “a same first direction” means in the claim limitation as recited in the claim 51. It is also not clear what “the same data driver” means. It could mean “the same row driver” or “the same column driver”. However, in Fig. 3B of applicant’s specification, the two neighboring blue emitters 42A and 42B are respectively in the second row and the first row (to the row driver 74 and the row driver 72), i.e., the two neighboring blue emitters 42A and 42B are in different rows, not in the same first direction as recited in the base claim 51. Moreover, the two neighboring blue emitters 42A and 42B are connected to the column driver 64, rather than the same row driver such as the row driver 72 or the row driver 74. Therefore, the metes and bounds of the coverage of at least base claim 51 cannot be ascertained.

Claims 2-5 depend upon the base claim 1 and are rejected due to their dependency on the base claim 1.

The claims 17-20 depend upon the base claim 16 and are rejected due to their dependency on the claim 16.

The claims 32-33 depend upon the base claim 31 and are rejected due to their dependency on the claim 31.

The claims 35-36 depend upon the base claim 34 and are rejected due to their dependency on the claim 34.

The claims 43-46 depend upon the base claim 42 and are rejected due to their dependency on the claim 42.

The claims 52-55 depend upon the base claim 51 and are rejected due to their dependency on the claim 51.

Reasons for Allowance

The following is an examiner's statement of reasons for allowance:

The Claim 37 or 38 set forth in the amended claimed invention of 01/31/2005 would provide a three-color pixel element of spaced-apart emitters in which the pixel element consists of a blue emitter disposed at the center of a pair of opposing red and a pair of opposing green emitters and the plurality of pixel elements may be arranged in rows and columns to form a display in which this array provides better perceived resolution and appearance of single full color displays by matching the human vision system. The claim invention would also provide the drive matrix for the pixel array consists of a plurality of rows and columns of the three-color pixel element and the drive matrix consists of a plurality of row and column drivers to drive the individual emitters in which the row drivers drive the red, green and blue emitters in each row, and the red and green emitters in each column are driven by a single column driver and a single column driver drives two columns of blue emitters. Thus, the number of drive lines and associated driver electronics used in the prior art are reduced in the claimed invention.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, 7-9, 10, 12-14, 15, 16-20, 22-24, 25, 27-29, 30, 31-33, 34-36, 39, 42-46, 51-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maeshima et al. U.S. Patent No. 6,486,923 (hereinafter Maeshima).

Re claims 1-5, 7-9, 10, 12-14, 15, 16-20, 22-24, 25, 27-29, 30, 31-33, 34-36, 39, 42-46, 51-55, Maeshima discloses a display comprising substantially a plurality of three-color pixel elements that form at least one row of said pixel elements, said three-color pixel element comprising:

A blue emitter disposed at an origin of a rectangular coordinate system having four quadrants (Fig. 10C);

A pair of red emitters spaced apart from said blue emitter and symmetrically disposed about said origin in a first pair of opposing quadrants of said rectangular coordinate system (Fig. 10C);

A pair of green emitters spaced apart from said blue emitter and symmetrically disposed about said origin in a second pair of opposing quadrants of said rectangular coordinate system (Fig. 10C).

Maeshima teaches a red emitter that can occupy a left unit-area polygon in said first pixel row, a green emitter that can occupy a left unit-area polygon in said second pixel row and a red emitter that can occupy a right unit-area polygon in said second pixel row, and a blue emitter that can occupy a center unit-area polygon in both said first and second pixel rows and it is obvious

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to know that two blue emitters should be connected to the same data driver which is where they have to receive their video signal. The prior art does not explicitly teach a left and a right unit area polygon, a blue emitter square shaped, and L-shaped green and red emitters. The prior art teaches an arrangement of LEDS in each light emitting block of red color signal, green color signal, and blue signal where the arrangement of Fig. 10C (2) consists of three color pixels elements. Thus, it would have been obvious to a person of ordinary skill in the art to modify the arrangement of LEDS in each light-emitting block of red color signal, green color signal, and blue signal where the arrangement of Fig. 10C (2) to achieve the function of a left and a right unit area polygon, a blue emitter square shaped, and L-shaped green and red emitters because it would provide an LED display device includes an LED display section including a plurality of light emitting blocks arranged in a matrix, each light emitting block including at least a red LED, a green LED and a blue LED and it is also obvious a person of ordinary skill in the art to know if two devices can perform the same function their shape does not matter.

Maeshima teaches an arrangement of LEDS in each light emitting block of red color signal, green color signal, and blue color signal where the arrangement of Fig. 10C (2) consists of a three-color pixel element. The arrangement can be divided into four different quadrants where the blue color is at the center of the quadrants disposed at the origin of an X and Y coordinates system forming a first, a second, a third, and fourth quadrant corresponding to providing a three-color pixel element comprising first and second pixel rows, each pixel row including three unit-area polygons, wherein an emitter occupies each said unit-area polygon, wherein a red emitter occupies a left unit-area polygon in said first row and a green emitter occupies a right unit-area polygon in said first pixel row, wherein a green emitter occupies a left

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unit-area polygon in said second pixel row and a red emitter occupies a right unit-area polygon in said second pixel row, wherein a blue emitter occupies a center unit-area polygon in both said first and said second pixel rows, and wherein adjacent horizontal pairs of said three-color pixel elements are vertically offset from one another by one said pixel row; and driving said blue emitters, said red emitters, and said green emitters, wherein said blue emitters of said three-color pixel element is coupled to a pair of blue emitters of a next nearest neighboring three-color pixel element. It is obvious to know that two blue emitters of two three-color pixel elements should be connected to the same data driver or same column driver because that is where they have to receive their video data for the display.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jin-Cheng Wang whose telephone number is (571) 272-7665.


The examiner can normally be reached on 8:00 - 6:30 (Mon-Thu).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Razavi can be reached on (571) 272-7664. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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